

CITY OF FLAGSTAFF

Municipal Greenhouse Gas Emissions Report Fiscal Year 2013



Introduction

Why We Track:

The City of Flagstaff is committed to making Flagstaff more resourceful and resilient. And one important component of resilience in Flagstaff is contribution toward climate change solutions. Therefore, the City of Flagstaff is committed to reducing our greenhouse gas emissions by 15% from FY 2009 levels. To make this happen, we are carefully monitoring City-wide energy and water consumption, and switching over as much energy as possible to clean renewables like solar power. Tracking these efforts not only contribute to protecting our climate, it also saves taxpayer dollars. The less money we have to spend on electric and gas consumption, the more we have to provide excellent service for Flagstaff residents.

What We Track:

Here is the list of the data that we are carefully monitoring:

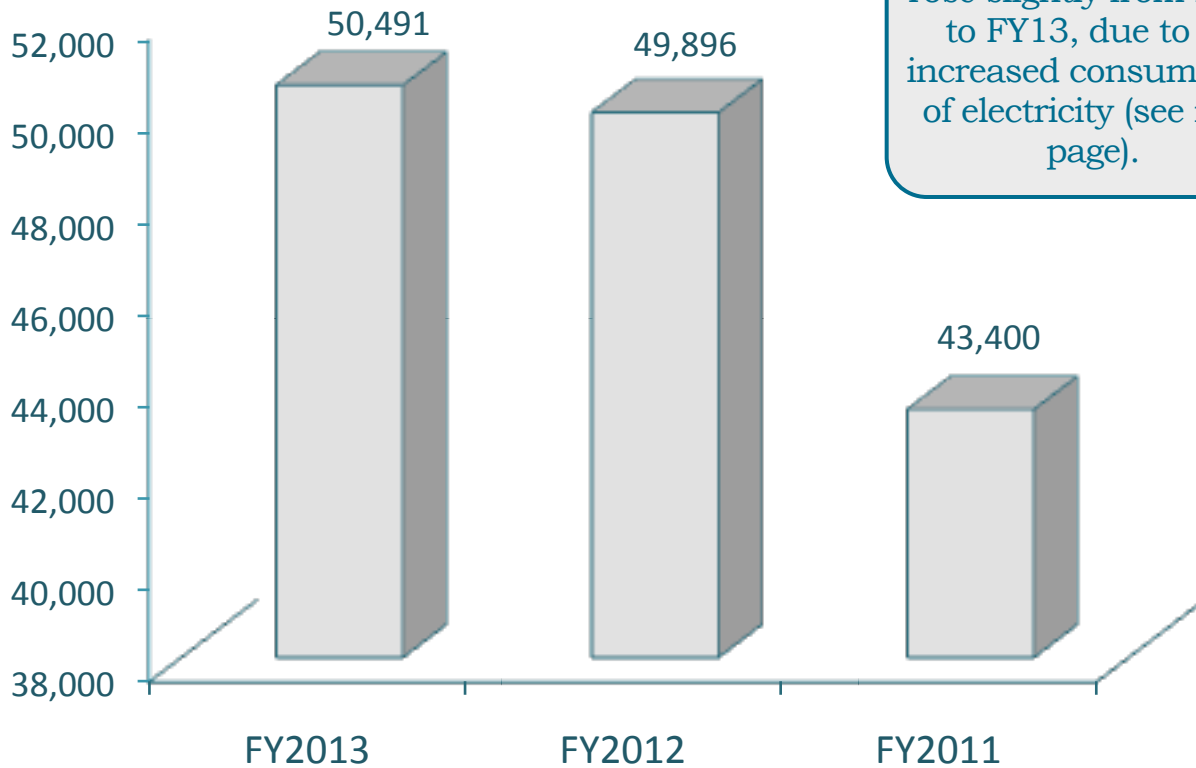
- Electricity consumption at all City facilities
- Natural Gas consumption at all City facilities
- Fuel consumed by employee commute
- Fuel consumed in diesel generators
- Fuel consumed by flights in and out of Flagstaff (within city limits)
- Fuel consumed by our fleet
- Operation hours of our biogas cogeneration plant
- Municipal waste production
- kWh of Solar Energy Production

Our Next Steps:

The City of Flagstaff is helping employees be more resourceful by assisting in sustainable office behaviors, like power strip utilization, double sided printing, power saver computer settings, and sensor light installation. Sustainable behavior change is critical for success. To facilitate this, we are continuously upgrading our facilities for energy efficiency. This includes upgrading to energy efficient appliances, changing out inefficient light bulbs, and providing opportunities for employees to recycle items like glass bottles and batteries at City Hall.

Municipal Emissions Summary

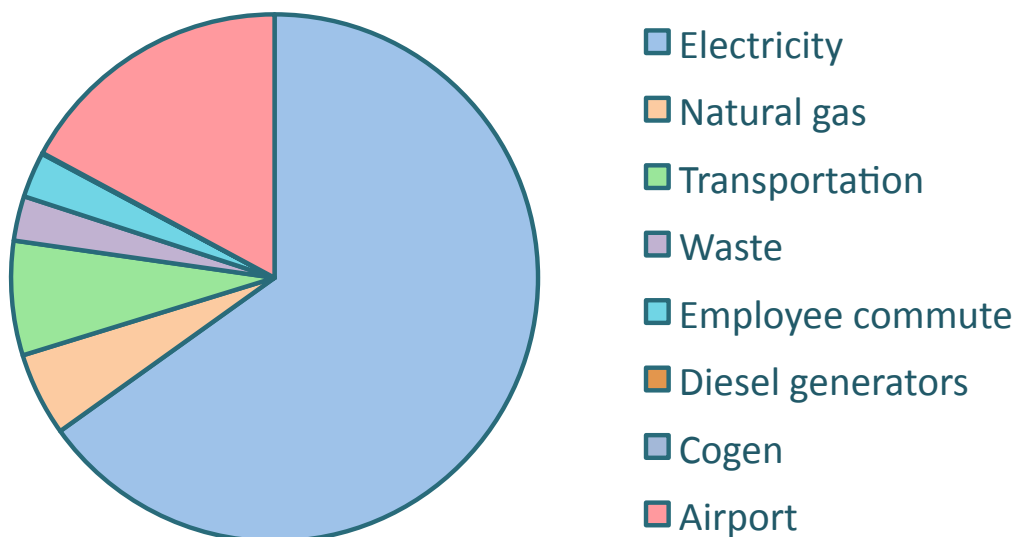
Total Metric Tons of CO₂e*



Municipal emissions rose slightly from FY12 to FY13, due to an increased consumption of electricity (see next page).

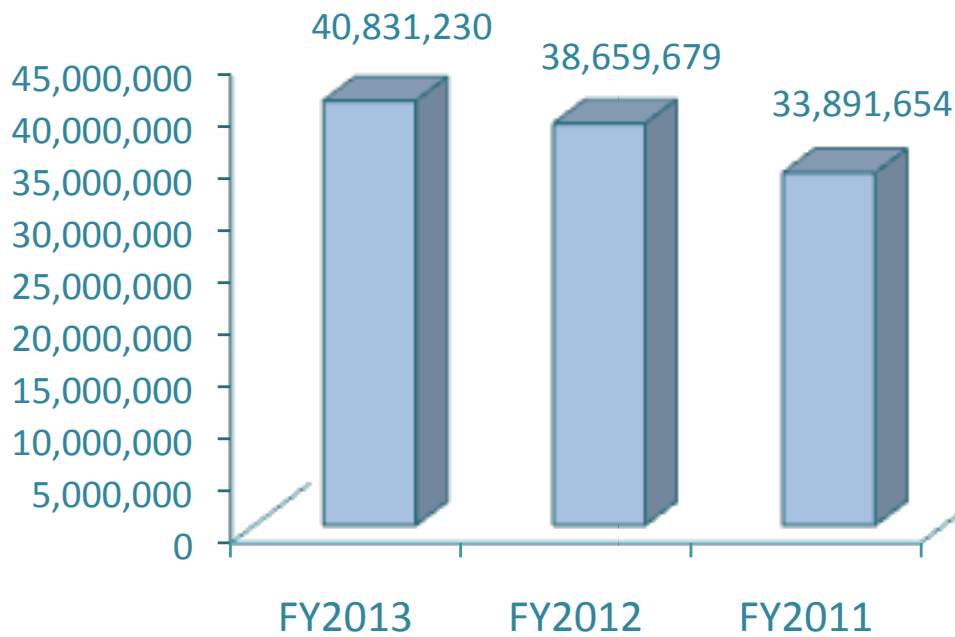
*CO₂e means “carbon dioxide equivalents,” and is the translation of all types of greenhouse gases into the amount of carbon dioxide which would create the same amount of climate change potential.

FY13 Emissions by Source



Electricity Consumption

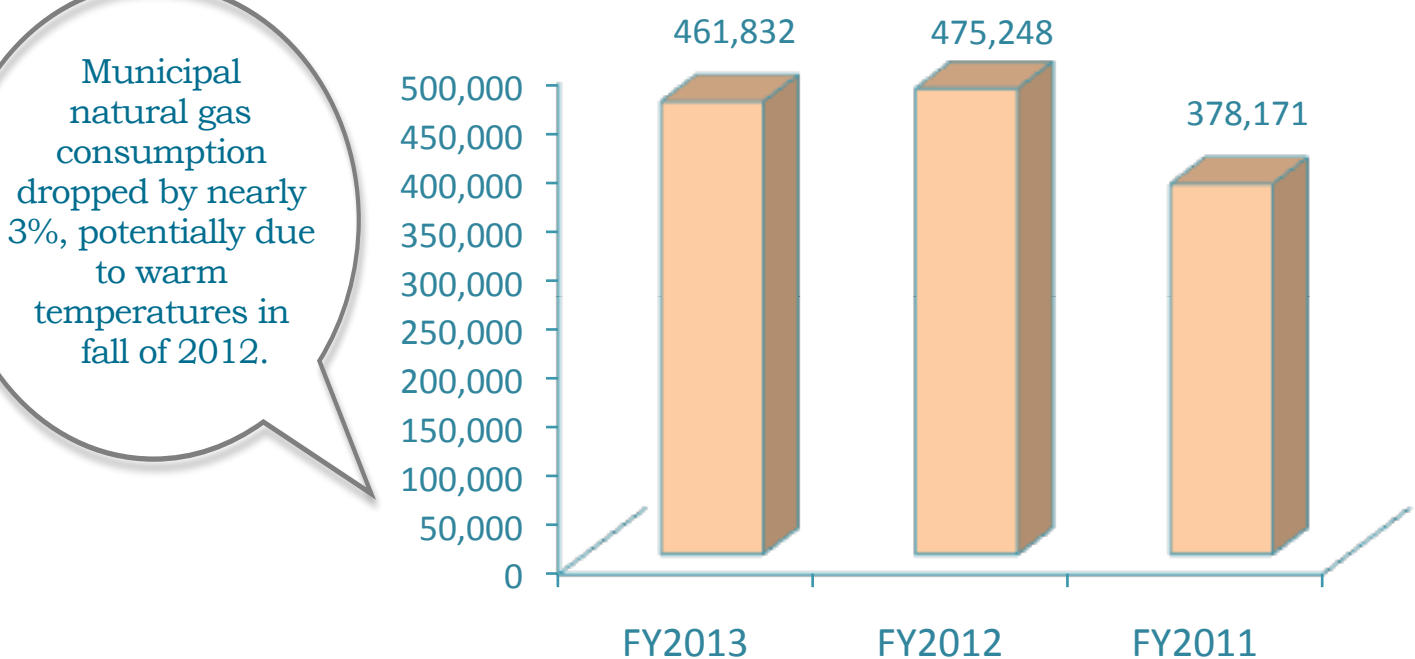
Total Kilowatt Hours Consumed



Municipal electricity consumption went up nearly 6% due to an increase in the consumption of groundwater instead of surface water. This is common in drier years.

Natural Gas Consumption

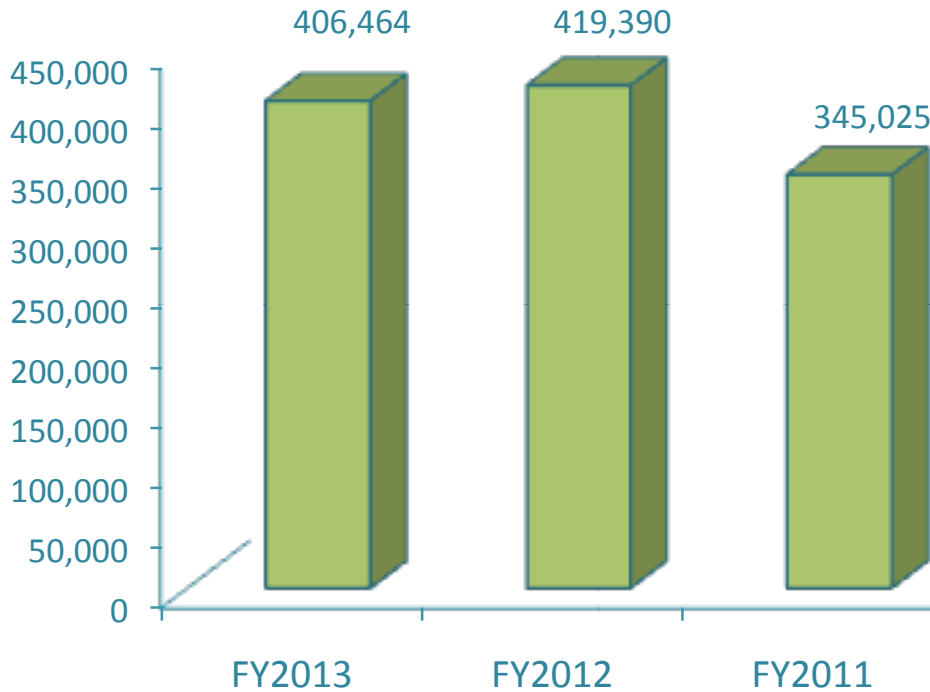
Total Therms Consumed



Municipal natural gas consumption dropped by nearly 3%, potentially due to warm temperatures in fall of 2012.

Transportation

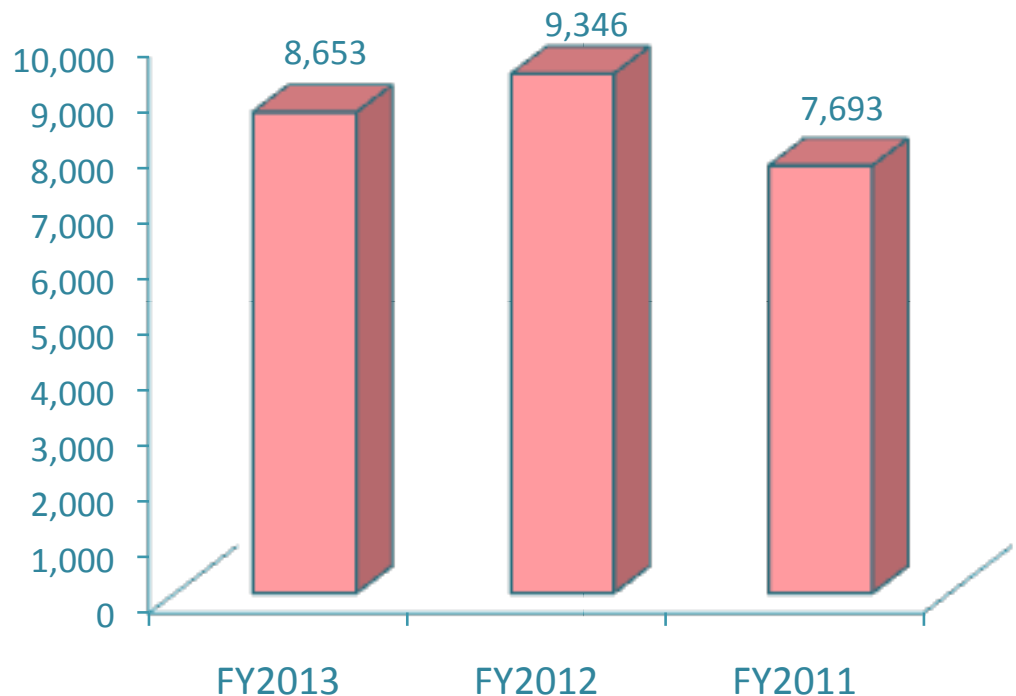
Gallons of Fuel Consumed



Gallons of fuel consumed by the City fleet decreased by 3%, due to new initiatives that have reduced the total number of vehicles in the fleet.

Airport

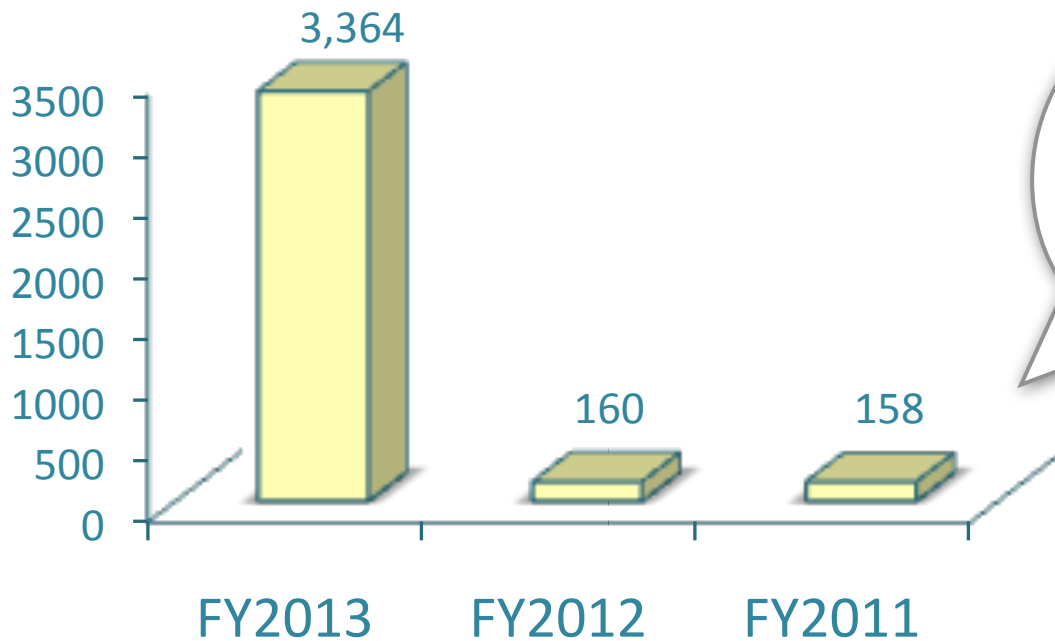
Metric Tons of CO₂e Produced



Metric tons of CO₂e produced by flights in and out of Flagstaff decreased by 7%, due to a decrease in non commercial flights.

Solar Power Generated

Megawatt Hours of Energy Produced



Solar energy production increased by 2000% due to new solar installations across City facilities

Other Data

Data	FY13	FY12	Comments
Tons of waste sent to landfill	1,311 Tons	1,534 Tons	Waste production reduced by 15% due to fewer pick ups at municipal parks
Hours the Cogeneration Plant Operated	1,795 hours	8,234 hours	Cogeneration hours were reduced by 78% due to mechanical difficulties.
Gallons of gas used by employee commute	159,934 gallons	161,284 gallons	Gallons of gas used in the employee commute remained close to the same from FY12 to FY13.